WHAT IS CLAIMED IS:

1. A planarization method using anisotropic wet etching, which can be applied on a substrate having an insulating layer thereon, the insulating layer having trenches therein, comprising:

mixing H_2SO_4, H_3PO_4, HF and H_2O to form an etching solution; and

placing the substrate into the etching solution to make the etching solution pass the surface of the insulating layer at a flow rate to etch the insulating layer.

2. The planarization method of claim 1, wherein the concentration of the H_2SO_4 is about 98% by weight.

3. The planarization method of claim 1, wherein the concentration of the H_3PO_4 is about 85% by weight.

4. The planarization method of claim 1, wherein the concentration of the HF is about 1% by weight.

5. The planarization method of claim 1, wherein the volume ratio of H_2SO_4 and H_3PO_4 : HF is about 50 – 100 : 1.

6. The planarization method of claim 1, wherein the etching rate of the etching solution to an insulating layer with a planar surface is about 50 – 80 Å/min.

7. The planarization method of claim 1, wherein the insulating layer is a silicon oxide layer.

8. A planarization method using anisotropic wet etching, which can be applied on a substrate having a first insulating layer thereon, the first insulating layer having large trenches and small trenches therein, comprising:

conformably forming a second insulating layer on the first insulating layer, a thickness of the second insulating layer is about the same as a depth of the large and the small trenches;

patterning the second insulating layer to form protrusions in the large trenches, a distance between the neighboring protrusions is about the same as the width of the small trenches;

mixing H_2SO_4, H_3PO_4, HF and H_2O to form an etching solution; and

placing the substrate into the etching solution to make the etching solution pass the surface of the first and the second insulating layer at a flow rate to etch the first and the second insulating layer.

9. The planarization method of claim 8, wherein the concentration of the H_2SO_4 is about 98% by weight.

10. The planarization method of claim 8, wherein the concentration of the H_3PO_4 is about 85% by weight.

11. The planarization method of claim 8, wherein the concentration of the HF is about 1% by weight.

12. The planarization method of claim 8, wherein the volume ratio of H_2SO_4 and H_3PO_4 : HF is about 50 – 100 : 1.

13. The planarization method of claim 8, wherein the etching rate of the etching solution to an insulating layer with a planar surface is about 50 – 80 Å/min.

14. The planarization method of claim 8, wherein the first insulating layer is a silicon oxide layer.

15. The planarization method of claim 8, wherein the second insulating layer is a silicon oxide layer.

16. A planarization method using anisotropic wet etching, which can be applied on a substrate having an insulating layer thereon, the insulating layer having large trenches and small trenches therein, comprising:

using an insulating material to form protrusions in the large trenches, wherein a distance between the neighboring protrusions is about the same as the width of the small trenches and a thickness of the protrusions is about the same as a depth of the large and the small trenches;

mixing H_2SO_4, H_3PO_4, HF and H_2O to form an etching solution; and

placing the substrate into the etching solution to make the etching solution pass the surface of the insulating layer and the protrusions at a flow rate to etch the insulating layer and the protrusions.

17. The planarization method of claim 16, wherein the concentration of the H_2SO_4 is about 98% by weight.

18. The planarization method of claim 16, wherein the concentration of the H_3PO_4 is about 85% by weight.

19. The planarization method of claim 16, wherein the concentration of the HF is about 1% by weight.

20. The planarization method of claim 16, wherein the volume ratio of H_2SO_4 and H_3PO_4 : HF is about 50 – 100 : 1.

21. The planarization method of claim 16, wherein the etching rate of the etching solution to an insulating layer with a planar surface is about 50 – 80 Å/min.